

New Weapons Meet Demands of Current Conflicts

By Debi Dawson

As the battlefield challenges in Operations Iraqi Freedom and Enduring Freedom continue to change and evolve, the Army is responding by adding upgraded weapons and new systems to its arsenal. The fruits of these labors are being realized as new capabilities are delivered to Soldiers deploying to Iraq and Afghanistan.

Among the new weapons in theater, or soon on their way, are a new sniper rifle; a new integrated shotgun and a new integrated grenade launcher that attach to the M4 Carbine or fire in stand-alone mode; a remote weapons station that operates much like a video game; and, a few years down the road, a lightweight machine gun.

Improvements in Sniper Weapons

Targeting insurgents quickly and accurately in civilian-dense areas in Iraq and Afghanistan is a challenge. The M110 Semi-Automatic Sniper System (SASS) is designed to dramatically improve sniper operations. The first Soldiers to receive the SASS, snipers from the 4th Brigade, 10th Mountain Division, had the weapons in time to train before shipping out. "Our focus is to try to get this weapon to units prior to their deployment," said MAJ Marc Meeker, assistant product manager for Crew Served Weapons, the Program Executive Office (PEO) Soldier organization responsible for the weapon. "We don't want to field it to them in theater. We would rather train them here on the ground in a peacetime environment, and then have them outfitted with the best and newest equipment as they go forward on the battlefield."

Snipers quickly recognized the M110's advantages, compared

with its predecessor, the M24. "It's everything a sniper wants," said SGT Jed Christianson, after training with the new system. "We're all very excited about this new weapon system because it's custom-tailored to the kind of fight we're in in Iraq."

"It's a very target-rich environment for them over there," Meeker said. Replacing the bolt-action M24 with the semi-automatic, magazine-fed M110 will significantly improve the sniper's rate of engagement.

"Operational testing showed that the SASS provides a 50 percent improvement in a sniper's rate of engagement versus the M24 at distances up to and including the 800-meter mark," explained Joshua Semick, the lead engineer for the M110.

According to Bob Galeazzi, product director for the M110, the weapon is "designed to shoot accurately, quickly and from far away. Rapid semi-automatic fire can also benefit the sniper if he ends up being ambushed." The magazine-fed weapon is superior to a bolt-action weapon, especially in situations where a sniper's spotter has had



A Soldier fires the M320 Grenade Launcher Module (GLM).

to fight off attackers with his M4 while the sniper is preoccupied with reloading loose rounds into his M24. Another challenge is to avoid detection. The M110's suppressor, which quiets the weapon, allows Soldiers to fire more shots from a single location without being detected.

The weapon is similar in appearance and function to the M16, which many Soldiers have used, so they can quickly get up to speed on the new system. The M110 includes a 3.5-10x power variable scope and the flexible MIL-STD-1913 Picatinny rail system. The rail system allows the weapon to be tailored with accessories such as

the AN/PVS-26 Sniper Night Sight, which was also fielded to 10th Mountain Soldiers.

The AN/PVS-26 Sniper Night Sight is a lightweight image-intensified night sight that mounts in front of the Day Optic Sight (DOS). With the AN/PVS-26, snipers can accurately acquire and engage targets out to 600 meters during limited visibility conditions and at night without removing the DOS.

Achieving success in Operations Iraqi Freedom and Enduring Freedom requires getting essential capabilities into the hands of Soldiers as quickly as possible. The M110 resulted from PEO Soldier's Soldier Enhancement Program (SEP), which identifies existing technologies and adapts them for military use in three years or less. This represents a dramatic improvement over the normal, seven-to-10 year acquisition timeline.

Accessories Enhance the M4 Carbine

Another system that resulted from the SEP is a key enhancement to the M4 Carbine, the M26 Modular Accessory Shotgun System (MASS). The M26 represents PEO Soldier's continuing effort to decrease combat load while enhancing capabilities. A 12-gauge modular shotgun developed by Product Manager Individual Weapons, the M26 is a lightweight alternative to the M500 and other shotgun systems currently in use. It can be fired in a stand-alone configuration or as an accessory weapon mounted under the barrel of the M4 Carbine.

The stand-alone configuration is 24 inches long (with the buttstock collapse) and weighs 5 pounds, 3 ounces. By removing a pin located behind the trigger guard and detaching the pistol grip and buttstock, the M26 can be mounted to an M4 without the use of tools. The weapon accessory configuration is 16.5 inches long and weighs 3 pounds, 8 ounces.

"There's no transition between the shotgun and the primary weapon because you don't have to sling [switch] between the two," said 1SG William Kone, who is assigned to the close combat team at the Aberdeen Test Center in Maryland. "It keeps the Soldier from



The Common Remotely Operated Weapon Station (CROWS).

having to carry that second weapon, and it lightens the load."

The M26 provides door-breaching, lethal and non-lethal capabilities in a single weapon. "Going into a door, the fastest way is to blow off the lock," Kone said. "The best tool for that is the M26. It's going to have a very high acceptance rate, particularly for the guy who has to carry it around."

The M320 Grenade Launcher Module will replace the current M203 grenade launcher attachment to the M4 and the M16 starting this year. The 40mm low-velocity grenade launcher M320, also a product of the SEP, is lighter, more accurate and safer than the M203 and has day and night capability. It can be used as a stand-alone weapon as well. Both accessories enhance the capabilities of the M4.

The M4 Carbine continues to be the Army's individual weapon of choice. The M4 is highly accurate and exceeds reliability requirements, even in desert conditions. Lighter and smaller than other rifles, the M4 is more maneuverable and can be tailored to any mission.



Soldiers from the 10th Mountain Division train with the Semi-Automatic Sniper System (SASS).

"It's unbelievable what you can do in terms of tailoring the weapon for something like building entry or engagement in an open area," said CWO4 Charles Petrie.

"The M4 is ideal for conducting cordon-and-search missions ... due to reduced size and weight," said ISG Scott Dugan of the 10th Mountain Division, who has served in Afghanistan.

Recent media reports have suggested that the M4 should be replaced, but Soldiers stand by the weapon and warn against the introduction of a new primary weapon in the middle of a war. "Changing this weapon will be a detriment and a major setback in basic marksmanship, especially with our nonstop rotation to combat," said CSM Vincent Camacho of the 101st Airborne Division. "Not once have I heard or seen any negative comments or action from Soldiers about the M4."

Calls to replace the M4 are based on preliminary results from an extreme dust test, in which the M4 experienced more stoppages than other rifles. The Army is still examining the results. The test, however, did not replicate actual battlefield conditions.

Taking Command of the Digital Battlefield

A generation of Soldiers who grew up playing video games can put

their skills to the test with the Common Remotely Operated Weapon Station (CROWS), which mounts on armored vehicles and allows gunners positioned safely inside to fire weapons using joysticks and computer screens. CROWS has been in operation since March of 2005. The next iteration of fielded systems is due this summer, providing improved reliability, sustainability and day/night sensors. The weapon station supports the MK19 Grenade Machine Gun, M2 .50-Caliber Machine Gun, M240B Machine Gun, and the M249 Squad Automatic Weapon. The CROWS sensor suite and fire control software allow on-the-move target acquisition day or night. Soldiers using CROWS have praised it for increased combat effectiveness and for saving lives.

SGT Michael DuPras, a team leader with 122nd Engineer Co., said, "While reentering [the base camp] and going through clearing procedures, a sniper shot at Soldiers, which the CROWS then located and engaged the sniper at approximately 2,000 meters with three rounds ... It was a confirmed kill."

CPT Darren Fowler, of the 2/12 CAV, said, "The CROWS are working really well in Iraq. Our tanks are rolling multiple missions daily and the tanks with CROWS are seeing a lot of action. This system has added more eyes available to see the battlefield. I can

look over walls without putting a Soldier's life in danger. This system is going to save lives."

Lightweight Weapon, Heavy-Duty Power

Farther on the horizon is a new .50-caliber machine gun to replace the venerable M2, which has seen more than 75 years of service. A possible replacement is the XM312, which provides the Soldier with the punch of a .50-caliber machine gun in the footprint of a 7.62 mm weapon system. The gun is capable of firing all current .50 caliber ammunition in the Army's inventory, including the standard M33 ball round, the M8 armor-piercing incendiary, the M903 sabot light armor penetrator and the MK211 multipurpose round that penetrates, fragments and starts fires.

Perhaps the biggest advantage of the XM312, though, is reduced weight. "The XM312 weighs 53 pounds, including tripod and traversing and elevation mechanism, compared to the M2 system's weight of 128 pounds, a savings of 75 pounds," said Alan Li, who works for Project Manager Soldier Weapons, a sub organization to PEO Soldier. He added that the system can be faster than an M2 because it does not need ballast to weigh down the tripod.

The XM312 produces 70 percent less recoil. This enables Soldiers to place their eyes on the weapon's magnification sights, which was unthinkable and potentially painful using the M2. Lower recoil also improves accuracy. Once the XM312 is deployed, all vehicles that mount the M2 will be able to mount the new system. In testing, the system has been successfully mounted to the Stryker Combat Vehicle and CROWS.

Other benefits of the XM312 include safety and training applications. The XM312 eliminates the need for the operator to adjust the headspace and timing using special tools for maintenance, reducing the amount of training required. The current XM312 has 131 parts, compared with 244 for the M2. "This translates to lower provisioning, increased maintainability, and improved reliability with fewer parts that can go wrong," Li said. Training time required to qualify on the XM312 is expected to be less because the system is easier to control when firing. The weight savings, reduced recoil and increased accuracy of the XM312 enable it to be employed in places not possible with the M2, such as in light aircraft, small watercraft and in situations previously reserved for light to medium machine guns.

COL Carl Lipsit, the officer who leads Project Manager Soldier Weapons, said that the M2 has served the Army well, but that it is time for a change. "It is a marvelous weapon that contributed to our success on the battlefield since it was fielded. But the times have changed, technology has changed and the way we fight wars has changed," Lipsit said. "To the warfighter, the XM312 is an excellent example of modern technology and design."

It is also an example of PEO Soldier's continuing commitment to securing the best technology for our Soldiers. "We don't rest on our laurels," said BG R. Mark Brown, the commander of PEO Soldier. "We know that on the horizon there will be something better, so we go out and chase the next best thing."

PEO Soldier is not just responsible for weapons. The organization develops, procures, fields and sustains virtually everything the Soldier wears or carries. For more information on Project Manager Soldier Weapons or other PEO Soldier programs, visit www.peosoldier.army.mil.



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